PENDING CLAIMS

1.   (Currently Amended) A navigation device comprising:

an electronic compass to detect an orientation and provide a corresponding heading signal;

one or more motion sensing devices to detect motion along different axes and provide corresponding motion signals; and

a processing unit communicatively coupled to the electronic compass and the one or more motion sensing devices to receive the heading signal and the one or more motion signals, determine a position and orientation, and automatically ~~provide~~ switch different navigation information On or Off depending on the orientation of the navigation device.

2.   (Original) The navigation device of claim 1 wherein the processing unit is further configured to provide different navigation information depending on whether the navigation device is affixed to a user or not.

3.   (Previously Presented) The navigation device of claim 2 further comprising:

a visible indicator to provide navigation information to a user.

4.   (Previously Presented) The navigation device of claim 1 wherein the navigation device automatically switches between different modes of operation depending on the orientation of the navigation device,

and provides either heading or position information, depending on the mode of operation.

5.   (Original) The navigation device of claim 1 wherein

if the navigation device is affixed to a user and the device is in a primary orientation, navigation calculations are made according to bipedal ambulation to provide a position,

if the navigation device is affixed to a user and the device is in a secondary orientation, then navigation calculations are made according to crawling ambulation to provide a position, and

if the navigation device is hand-held, only azimuth data is provided to the user.

6.   (Original) The navigation device of claim 1 further comprising:

a communication port to transmit navigation information.

7.   (Currently Amended) A method of navigation comprising:

~~determining whether a navigation device is affixed to a user;~~

detecting whether the navigation device is inserted into a holster;

obtaining an azimuth heading;

calculating a dead reckoning position if the navigation device is ~~affixed to the user~~

inserted into the holster;

providing the azimuth heading and dead reckoning position if the navigation device is

~~affixed to the user~~ inserted into the holster; and

providing azimuth heading otherwise.

8.   (Previously Presented) The method of claim 7 further comprising:

determining an orientation of the navigation device relative to a horizontal plane;

calculating the dead reckoning position according to bipedal ambulation when the

navigation device is affixed to the user and is in a first orientation; and

calculating the dead reckoning position according to crawling ambulation when the

navigation device is affixed to the user and is in a second orientation.

9.   (Currently Amended) A method comprising:

determining the orientation of a navigation device relative to a horizontal plane;

automatically selecting a first motion measurement algorithm if the navigation device is

in a first orientation;

automatically selecting a second motion measurement algorithm if the navigation device

is in a second orientation; and

providing a position according to the motion measurement algorithm selected;

automatically resetting the horizontal plane of reference to

a first physical horizontal plane of the navigation device when the navigation

device is in a first orientation, and

a second physical horizontal plane of the navigation device when the navigation device is in a second orientation.

10.   (Cancelled)

11.   (Original) The method of claim 9 further comprising:

determining if the navigation device is affixed to a user;

automatically selecting the first motion measurement algorithm if the navigation device is in the first orientation and affixed to the user;

automatically selecting the second motion measurement algorithm if the navigation device is in the second orientation and affixed to the user; and

suspending all motion measurement calculations if the navigation device is not affixed to the user.

12.   (Currently Amended) A machine-readable medium having one or more instructions for dead reckoning navigation, which when executed by a processor, causes the processor to perform operations comprising

~~determining whether a navigation device is affixed to a user;~~

detecting whether the navigation device is inserted into a holster;

obtaining an azimuth heading;

calculating a dead reckoning position if the navigation device is ~~affixed to the user~~ inserted into the holster;

outputting the azimuth heading and dead reckoning position if the navigation device is ~~affixed to the user~~ inserted into the holster; and

outputting the azimuth heading otherwise.

13.   (Currently Amended) ~~The machine-readable medium of claim 12 to further:~~

A computer-readable medium having one or more instructions for operating a navigation device, which when executed by a processor, causes the processor to perform operations comprising

determining an orientation of the navigation device relative to a horizontal plane,

calculating the dead reckoning position according to bipedal ambulation when the navigation device is affixed to the user and is in a first orientation, ~~and~~

~~calculation~~ calculating the dead reckoning position according to crawling ambulation when the navigation device is affixed to the user and is in a second orientation; and

resetting the horizontal plane of reference to

a first physical horizontal plane of the navigation device when the navigation device is in the first orientation, and

a second physical horizontal plane of the navigation device when the navigation device is in the second orientation.

14.   (Previously Presented) The method of claim 9 further comprising:
detecting if a step has been taken.

15.   (Previously Presented) The method of claim 9 further comprising:
providing heading information.

16.   (Previously Presented) The navigation device of claim 1 wherein the processing unit determines direction of a gravity vector from the one or more motion signals generated by the one or more motion sensing devices.

17.   (Currently Amended) ~~The navigation device of claim 1 further comprising:~~

A navigation device comprising:

an electronic compass to detect an orientation and provide a corresponding heading signal;

one or more motion sensing devices to detect motion along different axes and provide corresponding motion signals;

a processing unit communicatively coupled to the electronic compass and the one or more motion sensing devices to receive the heading signal and the one or more motion signals, determine a position and orientation, and automatically provide different navigation information depending on the orientation of the navigation device; and

a detector to detect when the navigation device is inserted ~~in~~ into a holster.

18. (Currently Amended) ~~The navigation device of claim 1~~

A navigation device comprising:

an electronic compass to detect an orientation and provide a corresponding heading signal, ~~wherein~~ the electronic compass ~~includes~~ having a configurable horizontal plane that is

set to a first physical horizontal plane of the navigation device when the navigation device is in a first orientation, and

set to a second physical horizontal plane of the navigation device when the navigation device is in a second orientation;

one or more motion sensing devices to detect motion along different axes and provide corresponding motion signals; and

a processing unit communicatively coupled to the electronic compass and the one or more motion sensing devices to receive the heading signal and the one or more motion signals, determine a position and orientation, and automatically provide different navigation information depending on the orientation of the navigation device.

19. (Previously Presented) The navigation device of 5 wherein the electronic compass, the one or more motion sensing devices, and the processing unit are physically incorporated and housed in the navigation device.

20. (Cancelled)

21. (New) A method comprising:

determining the orientation of a navigation device;

automatically selecting a first motion measurement algorithm if the navigation device is in a first orientation;

automatically selecting a second motion measurement algorithm if the navigation device is in a second orientation;

determining a direction of a gravity vector from one or more motion signals generated by one or more motion sensing devices; and

providing a position according to the motion measurement algorithm selected.